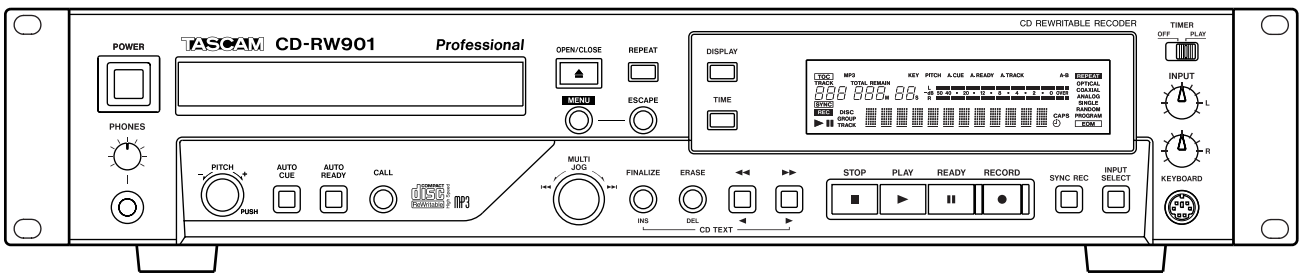
D00910920A

TASCAM
TEAC Professional Division

CD-RW901

CD Rewritable Recorder
Professional

OWNER'S MANUAL



IMPORTANT SAFETY PRECAUTIONS

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

This appliance has a serial number located on the rear panel. Please record the model number and serial number and retain them for your records.
Model number _____
Serial number _____

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

For U.S.A.

TO THE USER

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION
Changes or modifications to this equipment not expressly approved by TEAC CORPORATION for compliance could void the user's authority to operate this equipment.

CE Marking Information

a) Applicable electromagnetic environment: E4

b) Peak inrush current: 6.0 A

For the customers in Europe

WARNING
This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Pour les utilisateurs en Europe

AVERTISSEMENT
Il s'agit d'un produit de Classe A. Dans un environnement domestique, cet appareil peut provoquer des interférences radio, dans ce cas l'utilisateur peut être amené à prendre des mesures appropriées.

Für Kunden in Europa

Warnung
Dies ist eine Einrichtung, welche die Funk-Entstö rung nach Klasse A besitzt. Diese Einrichtung kann im Wohnbereich Funkstörungen versursachen; in diesem Fall kann vom Betrieber verlang werden, angemessene Maßnahmen durchzuführen und dafür aufzukommen.

IMPORTANT SAFETY INSTRUCTIONS

1 Read these instructions.

2 Keep these instructions.

3 Heed all warnings.

4 Follow all instructions.

5 Do not use this apparatus near water.

6 Clean only with dry cloth.

7 Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8 Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9 Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11 Only use attachments/accessories specified by the manufacturer.

12 Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13 Unplug this apparatus during lightning storms or when unused for long periods of time.

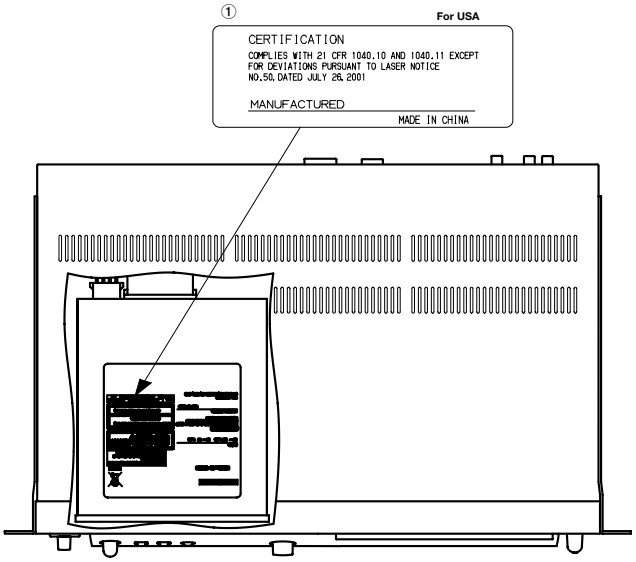
14 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

- Do not expose this apparatus to drips or splashes.
- Do not place any objects filled with liquids, such as vases, on the apparatus.
- Do not install this apparatus in a confined space such as a book case or similar unit.
- The apparatus draws nominal non-operating power from the AC outlet with its POWER switch in the off position.
- The apparatus should be located close enough to the AC outlet so that you can easily grasp the power cord plug at any time.
- An apparatus with Class I construction shall be connected to an AC outlet with a protective grounding connection.

Safety Information

This product has been designed and manufactured according to FDA regulations "title 21, CFR, chapter 1, subchapter J, based on the Radiation Control for Health and Safety Act of 1968", and is classified as a class 1 laser product. There is no hazardous invisible laser radiation during operation because invisible laser radiation emitted inside of this product is completely confined in the protective housings.

The label required in this regulation is shown at ①.



Optical pickup:	
Type:	SF-W37SFT
Manufacturer:	Sanyo Electric Co,Ltd.
Laser output:	Less than 0.7 mW on the objective lens (record)
Wavelength:	760 to 800 nm

CAUTION

- DO NOT REMOVE THE PROTECTIVE HOUSING USING A SCREWDRIVER.
- USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
- IF THIS PRODUCT DEVELOPS TROUBLE, CONTACT YOUR NEAREST QUALIFIED SERVICE PERSONNEL, AND DO NOT USE THE PRODUCT IN ITS DAMAGED STATE.

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1 – Introduction

Thank you for your purchase of the TASCAM CD-RW901 CD rewritable recorder.

Before connecting and using the unit, please take time to read this manual thoroughly to ensure you understand how to properly set up and connect the CD-RW901, as well as the operation of its many useful and convenient functions. After you have finished reading this manual, please keep it in a safe place for future reference.

NOTE

This product is designed to help you record and reproduce sound works to which you own the copyright, or where you have obtained permission from the copyright holder or the rightful licensor. Unless you own the copyright, or have obtained the appropriate permission from the copyright holder or the rightful licensor, your unauthorized recording, reproduction or distribution thereof may result in severe criminal penalties under copyright laws and international copyright treaties. If you are uncertain about your rights, contact your legal advisor. Under no circumstances will TEAC Corporation be responsible for the consequences of any illegal copying performed using the CD-RW901.

Supplied accessories

In addition to this manual, the CD-RW901 has been packed with the following:

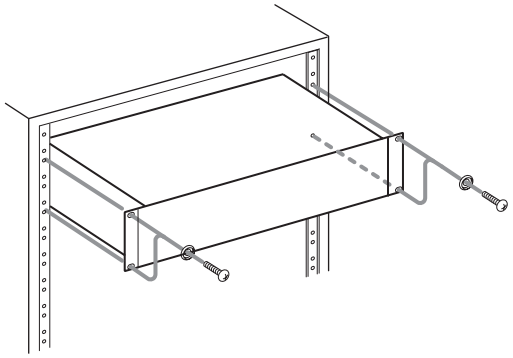
- RC-RW901 remote control unit 1
- AC power cable 1
- A rack-mounting screw kit (screws and washers)..... 1
- A waranty card..... 1

Contact your TASCAM supplier if any of these items are missing.

Rack-mounting the unit

If you are mounting the unit in a rack, leave 1U of space above it and 4 inch (10 cm) or more of space at the rear.

Use the rack-mounting kit to mount the unit in a standard 19-inch equipment rack, as shown in this section. Remove the feet of the unit before mounting.



About this manual

In this manual, we use the following conventions:

- The names of keys and controls are given in the following typeface: **ERASE**.
- When the alphanumeric portion of the display shows a message, this is shown in the following typeface: `Complete`.
- If a preset indicator in the display (i.e. one which cannot change, but is either on or off) is shown, this is shown as follows: **RANDOM**.
- Selectable value (i.e. values of dB) or ON and OFF selection (i.e. SRC>XXX) is shown in the following typface: XXX.

About CD-R and CD-RW discs

CD-R discs can be recorded once only. Once they have been used for recording, they cannot be erased or re-recorded. However, if space is available on the disc, additional material can be recorded. The pack-aging of CD-R discs will include one of the following logos:

By contrast, a CD-RW disc can be used in much the same way as a CD-R disc, but the last track or tracks recorded can be erased before the disc has been "finalized", and the space on the disc can be re- used for other recordings. The packaging of CD-RW discs will include the logo one of the following logos:

However, you should note that an audio CD created using a CD-RW901 disc may not play back satisfactorily on every audio CD player. It will, naturally, be playable on the CD-RW901. This is in no way a limitation of the CD-RW901 itself, but of the difference between the different types of media and the methods used to read them.

There are precautions that you should take when handling CD-R and CD-RW discs.

- Avoid touching the recording (non-label) side of a disc on which you will be recording. Recording on a disc requires a cleaner surface than playing back, and fingerprints, grease, etc. can cause errors in the recording process.
- CD-R and CD-RW discs are sensitive to the effects of heat and ultraviolet rays. It is important that they are not stored in a location where direct sunlight will fall on them, and which is away from sources of heat such as radiators or heat-generating electrical devices.
- Always store CD-R and CD-RW discs in their cases to avoid dirt and dust accumulating on their surfaces.
- When labeling CD-R and CD-RW discs, always use a soft oil-based felt-tipped pen to write the information. Never use a ball-point or hard-tipped pen, as this may cause damage to the recorded side.
- Always keep the recording sides of the discs away from grime and dust to avoid a reduction in sound quality. To clean a disc, wipe gently with a soft dry cloth from the center towards the outside edge. Do not use thinner, gasoline, benzene or LP cleaning fluid, as these will damage the disc and cause the disc unplayable.
- Do not put labels or protective sheets on the discs and do not use any protective coating spray.
- If you are in any doubt as to the care and handling of a CD-R and CD-RW discs, read the precautions supplied with the disc, or contact the disc manufacturer directly.

About finalizing

Although audio data may be written on a CD-R or CD-RW disc, a standard CD player will not be able to read the data (i.e. play back the audio) until a final *TOC has been written at the start of the disc.

*TOC:Table of contents
Information of recorded data, which contains titles, starting and ending addresses, and etc..

The process of writing this table of contents is known as "finalizing". Once this has been done, no further data can be written to the disc. See "Finalizing" on page 31 for details. In the case of a CD-RW disc which has been finalized, the whole of the disc may be erased, or the disc may be "refreshed", and the disc re-used.

In addition, a CD-RW disc that has been finalized may be "unfinalized", i.e. only the TOC is removed. This allows further tracks to be recorded to the disc, provided that there is space on the disc.

"Recordable" discs

In this manual, we use the term "recordable" disc to describe a CD-R or CD-RW disc that has not been finalized, i.e. further recording is possible on the disc.

Environmental considerations

The CD-RW901 may be used in most areas, but to maintain top performance, and prolong operating life, observe the following environmental conditions:

- The nominal temperature should be between 5°C and 35°C (41°F and 95°F).
- Relative humidity should be 30 to 90 percent.
- As the unit may become hot during operation, always leave sufficient space above the unit for ventilation. Do not install this unit in a confined space such as a bookcase, and do not put anything on top of the unit.
- Avoid installing this unit on top of any heat-generating electrical device such as a power amplifier.
- Make sure that the unit is mounted in a level position for correct operation.

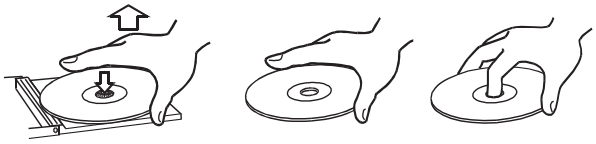
NOTE

The voltage supplied to the unit should match the voltage as printed on the rear panel. If you are in any doubt regarding this matter, consult an electrician.

Handling of compact discs

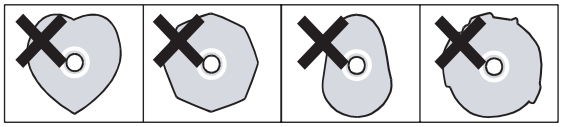
The CD-RW901 has been designed for the playback of CD-DA (standard audio) format discs and MP3 files recorded on the discs using the ISO9660 format: In addition to ordinary 5-inch and 3-inch CDs, it can also play properly recorded CD-R and CD-RW discs.

- Always place the compact discs in the trays with their label facing upward.
- To remove a disc from its case, press down on the center of the disc holder, then lift the disc out, holding it carefully by the edges.



- Avoid getting fingerprints on the signal side (the non-label side). Grime and dust may cause skipping, so keep discs clean and store them in their cases when not being played. To clean the signal side of a disc, wipe gently with a soft dry cloth from the center towards the outside edge.

- Do not use any record spray, anti-static solutions, benzene, paint thinner or other chemical agents to clean CDs as they could damage the delicate playing surface. It may cause CDs to become unplayable.
- Discs should be returned to their cases after use to avoid serious scratches that could cause the laser pickup to “skip.”
- Keep discs away from direct sunlight, and places of high heat and humidity. If left in such places, warping could result.
- Do not affix any labels or stickers to the label side of the disc. Do not write on the disc with a ballpoint pen.
- Do not insert discs that have adhesive remaining from tape or stickers that have been removed. If they are inserted into the player, they could stick to the internal mechanism, requiring removal by a technician.
- Do not use cracked discs.
- Only use circular compact discs. Avoid using non-circular promotional, etc. discs.



- The CD-RW901 cannot play unfinalized CD-R/RW discs.
- Music discs with copy control, a copy-protection system, have been released form several record companies in an attempt to protect the copyright. Since some of these discs do not comply with the CD specifications, they may not be playable on the CD-RW901.

Never use a stabilizer or printable discs

Using commercially available CD stabilizers or printable recordable discs with this player will damage the mechanism and cause it to malfunction.

NOTE

Never use a disc that has had a stabilizer mounted to it. The residual adhesive may cause the disc to stick to the turntable of the CD-RW901. If it sticks to the turntable, you will need a technician to get it out.

Beware of condensation

If the unit (or a compact disc) is moved from a cold to a warm place, or used after a sudden temperature change, there is a danger of condensation; vapor in the air could condense on the internal mechanism, making correct operation impossible. To prevent this, or if this occurs, let the player sit for one or two hours at the new room temperature before using.

Connections

The following should be noted when you connect the unit to other equipment.

It is possible to connect the unit's **DIGITAL COAXIAL IN**, **DIGITAL OPTICAL IN**, **DIGITAL IN (AES/EBU)**, and balanced or unbalanced **ANALOG INs (L, R)** to other equipment at the same time. However, the unit can receive signals from only one digital input at a time. Currently selected input jack is shown on the display.

Audio signals output from the unit are output from the balanced or unbalanced **ANALOG OUT** jacks, as well as from the **DIGITAL COAXIAL OUT**, **DIGITAL OPTICAL OUT** and **DIGITAL OUT (AES/EBU)** connector simultaneously (but not from the digital outputs in stop mode). Currently selected input jack is shown on the display.

Control connections

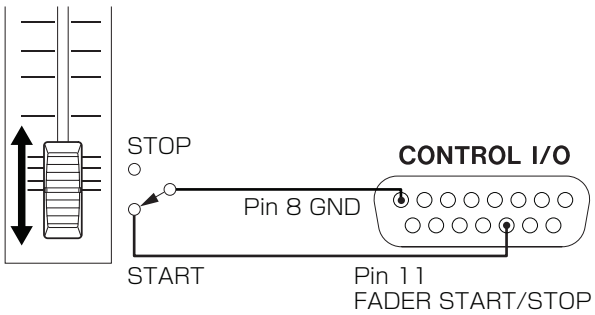
The pinouts of the **CONTROL I/O** (parallel) terminal on the rear panel (see "Rear panel" on page 11) are:

Pin	Function
1	STOP TALLY OUT
2	REC TALLY OUT
3	SKIP (forward) IN
4	SKIP (back) IN
5	EOM TALLY OUT
6	REC IN
7	CALL IN
8	GND
9	PLAY TALLY OUT
10	READY TALLY OUT
11	FADER, START/STOP
12	STOP IN
13	PLAY IN
14	READY IN
15	+5V[a]

a. The maximum current supplied from this terminal is 50 mA.

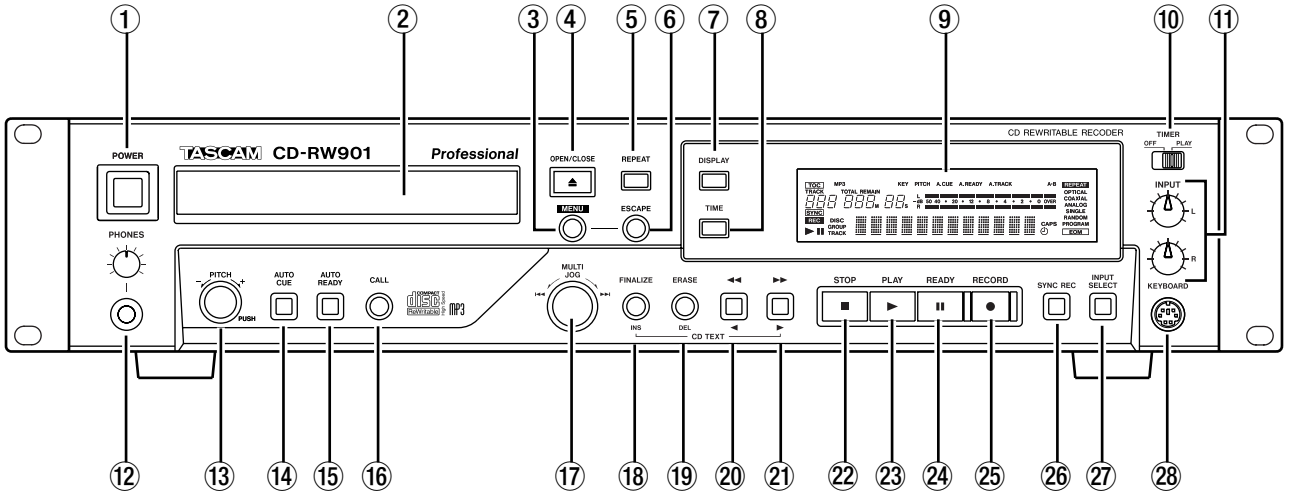
Tall signals are open collector, with a maximum current of 50 mA. Input signals are active when low (groun) for ≥ 30 ms.

A fader start/stop control should be wired according to the following schematic:



2 – Features of the CD-RW901

Front panel



① **POWER switch** The power switch is used to switch the unit on and off.

② **Disc tray** Discs should be placed label side upwards in the disc tray. When a disc is loaded into the unit, the display shows **TOC Reading** for a short period while the unit determines the contents of the disc.

③ **MENU key** Use this key to call up the menu options (see "Operation basics" on page 16).

④ **OPEN/CLOSE key** Use this key to open and close the disc tray. The display shows **Open** when the tray is opening and **Close** when the tray is closing.

⑤ **REPEAT key** Use this key to set the repeat playback mode on and off.

⑥ **ESCAPE key** When in a menu mode, this key cancels the menu item selected.

⑦ **DISPLAY key** Use this key to see the current disc title when the disc is stopped. When the disc is playing or in ready mode, press this key to see the current track title.

⑧ **TIME key** Use this key to cycle through the time modes shown on the display (see "Time display switching" on page 20).

⑨ **Display** The display is used to show the current status of the unit, as well as the current menu settings.

⑩ **TIMER switch (PLAY, OFF)** Using this key switches Timer play on and off. See "Timer playback" on page 21 for details.

⑪ **INPUT (L,R) controls** Use these concentric controls to adjust the level of the analog audio signals received at the **ANALOG IN** jacks.

⑫ **PHONES jack and the level control** Use a standard pair of stereo headphones, equipped with a 1/4-inch plug, with this jack.

Adjust the volume from the jack with the level control (turn clockwise for higher volume).

⑬ **PITCH control** Push this control to set the Pitch Control on and off. Turning this control adjusts the value within ±16.0%.

⑭ **AUTO CUE key** Use this key to set Auto Cue on and off.

⑮ **AUTO READY key** Use this key to set Auto Ready on and off.

⑯ **CALL key** Pressing this key locates a track to the last point where playback was previously started in playback ready mode, and puts the unit into playback ready mode.

During recording, pressing this key assigns an index number manually.

⑰ **MULTI JOG dial** Use this dial to select tracks for playback, to set parameter values.

In addition, pushing the dial acts like an **ENTER** key, i.e. the currently-displayed value or setting is confirmed.

⑱ **FINALIZE/INS key** Use this key to finalize recordable discs (see "Finalizing" on page 31).

When in playback or playback ready mode, pressing this key shows the disc's ISRC code on the display.

It also acts like a space key when entering TEXT data (see "Title input operation" on page 33).

⑲ **ERASE/DEL key** Use this key (with CD-RW discs only) to erase tracks, or a whole disc, or to refresh a "bad" disc, or to unfinalize a finalized disc (see

"Erasing" on page 32 for details).

When in playback or playback ready mode, pressing this key shows the disc's RID code on the display.

It also acts like a delete key when entering TEXT data (see "Title input operation" on page 33).

⑳ **◀◀/◀ key** Use this key to operate review playback (search) while in playback or ready mode.

When INDEX is on, and when in playback or playback ready mode, using this key searches indexes backwards within a track.

When Directory search is on, and when stopped, using this key selects the directory.

It also moves the cursor in the left direction when entering TEXT data.

㉑ **▶▶/▶key** Use this key to operate cue playback (search) while in playback or ready modes.

When INDEX is on, and when in playback or playback ready modes, using this key searches indexes forwards within a track.

When Directory search is on, and when stopped, using this key selects the directory.

It also moves the cursor in the right direction when entering TEXT data.

㉒ **STOP key** Use this key to stop playback or recording.

㉓ **PLAY key** Use this key to start or resume playback or recording.

㉔ **READY key** Use this key to standby for playback or recording.

㉕ **RECORD key** Use this key to enter record ready mode (see "Basic recording" on page 26 for details) and also to enter manual track divisions (see "Manually divide track" on page 29).

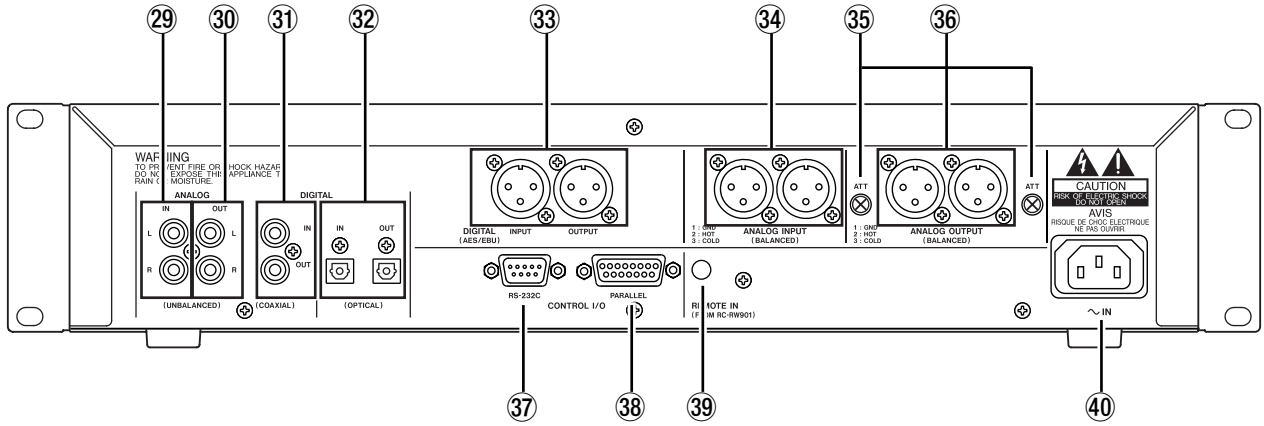
㉖ **SYNC REC key** Use this key to turn synchronized recording on and off before starting to record (see "Synchronized recording" on page 27 for details).

When EXT SYNC is on, pressing this key turns the 48k Fs adjustment function on and off (see "EXT SYNC playback" on page 21).

㉗ **INPUT SEL** Use this key to select the different audio inputs and the input combinations (see "Input selection" on page 25 for full details).

㉘ **KEYBOARD jack** An IBM PC-compatible keyboard with PS/2 interface can be connected to this terminal to enable certain operations of the CD-RW901 with the keyboard. Title input operations, in particular, can be performed with greater efficiency.

Rear panel



㉙ **ANALOG IN (UNBALANCED) (L, R)** These RCA jacks accept analog audio signals from suitably-equipped units (at –10 dBV).

㉚ **ANALOG OUT (UNBALANCED) (L, R)** These RCA jacks output analog audio signals (at –10 dBV levels) to suitably-equipped units.

㉛ **DIGITAL COAXIAL (IN, OUT)** These two RCA jacks accept and output digital audio in standard consumer format (SPDIF).

㉜ **DIGITAL OPTICAL (IN, OUT)** These two TOSLINK optical connectors accept and output digital audio using optical fiber connectors.

㉝ **DIGITAL IN/OUT (AES/EBU)** These two XLR connectors accept and output digital audio in standard professional format.

㉞ **ANALOG INPUT (BALANCED) (L, R)** These XLR connectors accept analog audio signals at +4 dBu from suitably-equipped units.

The wirings are: 1=grounding, 2=hot, 3=cold.

㉟ **ATT control right and left** Use a small Phillips screwdriver with these attenuators to reduce the output level from either the right or left balanced analog output. The adjustable level is up to -10 dB.

㊱ **ANALOG OUT (BALANCED) (L, R)** These XLR connectors output analog audio signals at +4 dBu to suitably-equipped units.

The wirings are: 1=grounding, 2=hot, 3=cold.

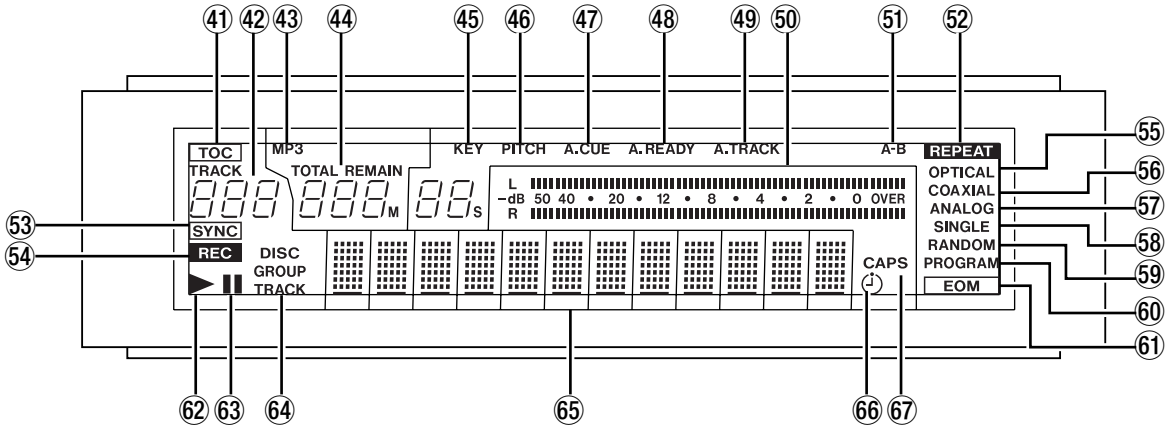
㊲ **CONTROL I/O (parallel) terminal** Use this 15-pin D-sub connector to connect the unit to suitably-equipped units, allowing control of the CD-RW901. The pinouts of this connector are described (see Connections" on page 9).

㊳ **CONTROL I/O (RS-232C) terminal** RS-232C compatible serial control from an external PC can be performed.

㊴ **REMOTE IN terminal** Connects the supplied RC-RW901 remote control unit.

㊵ **AC IN jack** Connects the power cable supplied.

Display



This display shows various types of operation information, including CD disc information, deck operation modes, and menu status.

㊶ **TOC** The **TOC** indicator lights up red when a loaded disc contains TOC (Table of Contents) data.

㊷ **Track number display** During playback or selection, the track number is displayed.

When Incremental playback is on, and when in playback or playback ready mode, the **TRACK** indicator blinks.

㊸ **MP3** The **MP3** indicator lights when a MP3 disc is in the deck.

㊹ **Counter display** Depending on the time display mode, **TOTAL** or **REMAIN** are lit. The counter display indication are in minutes (three digits) and seconds (two digits).

㊺ **KEY** The **KEY** indicator lights when Key Control is on.

㊻ **PITCH** The **PITCH** indicator lights when Pitch Control is on.

㊼ **A.CUE** The **A.CUE** indicator lights when Auto Cue is on.

㊽ **A.READY** The **A.READY** indicator lights when Auto Ready is on.

㊾ **A. TRACK** The **A.TRACK** indicator lights when the Auto Track is on.

㊿ **Meter** This displays the playback level, as well as the input level of the source device.

(51) **A-B** The **A-B** indicator lights when the A-B repeat function is on.

Also, this flashes until a "B-point" is entered.

(52) **REPEAT** The **REPEAT** indicator lights when the Repeat function is on.

(53) **SYNC** The **SYNC** indicator lights up when SYNC is on.

(54) **REC** When the SRC function is on, this lights during recording, or in recording standby mode.

When the SRC function is off, this flashes during recording, or in recording standby mode.

㊺ **OPTICAL** The **OPTICAL** indicator lights when the input source is set to optical.

㊻ **COAXIAL** The **COAXIAL** indicator lights when the input source is set to coaxial.

㊼ **ANALOG** The **ANALOG** indicator lights up when the input source is connected to unbalanced analog input.

The indicator blinks when the input source is connected to balanced analog input.

㊽ **SINGLE** The **SINGLE** indicator lights when Single Playback mode is set.

㊾ **RANDOM** This **RANDOM** indicator lights when Random Playback mode is set.

㊿ **PROGRAM** The **PROGRAM** indicator lights when Program Playback mode is set.

(61) **EOM** The **EOM** indicator lights when the remaining track/disc time is less than the value set in EOM function.

(62) ▶ This lights during playback, and also blinks during Auto Cue point search.

(63) ❚❚ This lights during playback or recording standby mode.

(64) **DISC, GROUP, TRACK display** The **DISC** indicator lights up when a disc loaded and is stopped.

The **GROUP** indicator lights up when MP3 Directory playback mode is on.

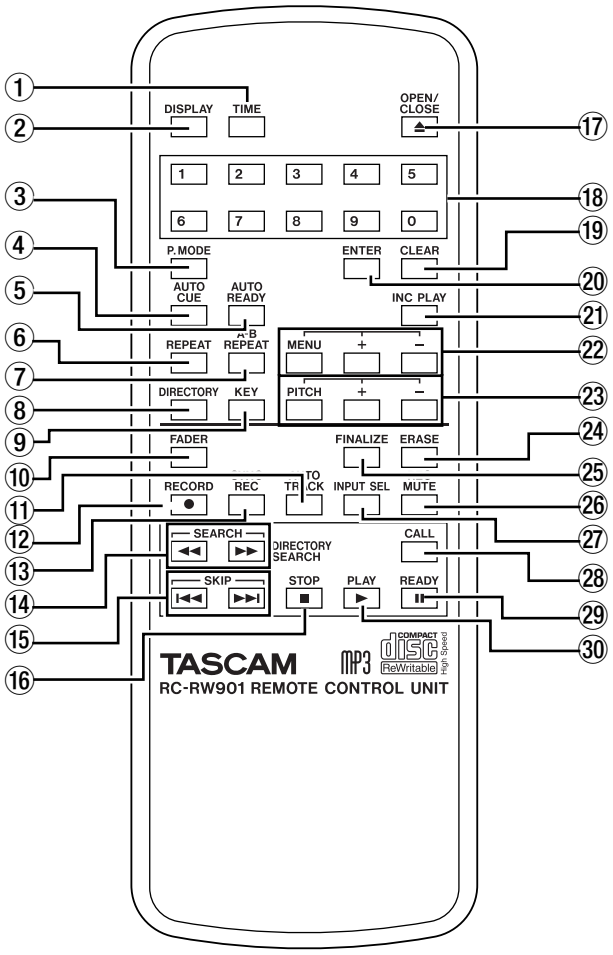
The **TRACK** indicator lights up during playback or recording , also during playback or recording standby mode.

(65) **Character display** Disc information, track information, menu, message, time, and operation status are displayed here.

(66) ⏲ This lights when the Timer Play function is on.

(67) **CAPS** The **CAPS** indicator lights during title input to indicate CAPS mode is on. In lower case letter mode, there is no indication.

RC-RW901 Remote control unit



① **TIME key** Press this key to cycle through the time display modes.

② **DISPLAY key** Press this key to see the current disc title when the disc is stopped, or the current track title while in playback or ready mode.

When entering TEXT data, using this key switches the text characters.

③ **P.MODE key** Use this key to choose between the different playback modes (single play, continue play, etc.).

④ **AUTO CUE key** Use this key to switch Auto Cue mode on and off

⑤ **AUTO READY key** Use this key to switch Auto Ready mode on and off.

⑥ **REPEAT key** Changes between the various repeat modes when playing back (see “Repeat playback” on page 21).

⑦ **A-B key** Sets the A to B repeat points and playback mode (see “A to B repeat playback” on page 22).

⑧ **DIRECTORY key** Use this key to switch MP3 file directory playback on and off.

⑨ **KEY key** Use this key to switch Key Control on and off.

⑩ **FADER key** Use this key to start fade-in recordings or to start a fade-out when recording (see “Fade-in and fade-out recording” on page 27 for details).

⑪ **AUTO TRACK key** Use this key to switch Auto Track mode on and off.

⑫ **RECORD key** Use this key to enter record ready mode.

⑬ **SYNC REC key** Use this key to turn synchronized recording on and off (see “Synchronized recording” on page 27 for details).

⑭ **SEARCH keys (◀◀/▶▶)** Use these keys to move the playback position inside a track.

⑮ **SKIP (I◀◀/▶▶I) keys** Use these keys to move between tracks when playing back (equivalent to rotating the **MULTI JOG** dial).

⑯ **STOP key** Use this key to stop playback or recording.

⑰ **OPEN/CLOSE key** Opens and closes the disc tray.

⑱ **Number keys (0 through 9)** Use these keys for direct entry of track numbers when playing back, or making a programmed play list.

⑲ **CLEAR key** Clears a mistaken entry made with the number keys.

In the program mode, pressing this key cancels the program entered at the last.

It also acts like the **ESCAPE** key in the Menu mode.

⑳ **ENTER key** Pressing this key is equivalent to pressing the **MULTI JOG** dial to confirm an entry.

㉑ **INC PLAY key** Use this key to switch Incrementl playback on or off.

㉒ **MENU key and +/– key** Pressing the **MENU** key turns the mode on or off. The **+/– key** is used to select menu options and make settings during Menu mode.

㉓ **PITCH key and +/– key** Use this key to switch Pitch Control on and off, and set the pitch value.

㉔ **ERASE key** Erases tracks (CD-RW discs only), or a whole disc, or to refresh a “bad” disc, or to unfinalize a finalized disc (see “Erasing” on page 32 for details).

㉕ **FINALIZE key** Finalizes recordable discs. See “Finalizing” on page 31 for details.

㉖ **REC MUTE key** Use this key when recording, to mute the input signal for about four seconds and then to enter record ready mode (see “Rec mute function” on page 30).

㉗ **INPUT SEL key** Use this key to select the different audio inputs and the input combinations (see “Input selection” on page 25 for full details).

㉘ **CALL key** Pressing this key locates a track to the last point where playback was previously started in playback ready mode, and puts the unit into playback ready mode.

During recording, pressing this key assigns an index number manually.

㉙ **READY key** Use this key to standby for playback or recording.

㉚ **PLAY key** Use this key to start playback, or enter record mode from record ready mode.

The various settings and editing operations possible with the CD-RW901 are performed through menu options shown on the display. Among the many menu setting options, some may be made directly using the keys on the remote control.

Menu configuration

The menus are configured as shown below. Please see the reference page for more details of each menu.

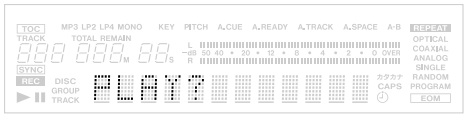
Menu option	Sub-Menu option	Function	Reference page
PLAY	PLAY MODE	Playback mode settings	P19 (“Playback modes”)
	PITCH STEP	Pitch control variable pitch setting	P22 (“Pitch control function”)
	KEY	Key control mode on/off	P22 (“Key control function”)
	KEY LEVEL	Key control level setting	P22 (“Key control function”)
	DIRECTORY	MP3 disc directory mode on/off	P24 (“Playing back MP3 files”)
	INC PLAY	Incremental playback on/off	P23 (“Incremental playback”)
	EOM_TRK	Track EOM setting	P23 (“End of disc/track message”)
	EOM_DISC	Disc EOM setting	P23 (“End of disc/track message”)
	EXT_SYNC	External sync playback on/off	P21 (“EXT SYNC playback”)
	A_CUE LEVEL	Auto Cue level setting	P23 (“Auto Cue function”)
REC	VOLUME	Input level setting	P25 (“Input selection”)
	FADE IN	Fade-in time setting	P27 (“Fade-in and fade-out recording”)
	FADE OUT	Fade-out time setting	P27 (“Fade-in and fade-out recording”)
	SRC	Sampling rate converter on/off	P25 (“Frequency conversion”)
	SYNC LEVEL	Sync recording operating level	P27 (“Sync recording”)
	A_TRK	Auto track on/off	P28 (“Automatic track division”)
	A_TRK LEVEL	Auto track operating level	P28 (“Automatic track division”)
	A_TRK TIME	Auto track operating time	P28 (“Automatic track division”)
	SYNC TRIM	Sync recording operating time	P28 (“Synch recording with trim function”)
	A_TRK TRIM	Auto track operating time	P29 (“Automatic track division with trim function”)
	COPY ID	Copy ID setting	P30 (“Copy protection”)
	INDEX INC	Index increment on/off	P29 (“Automatically incrementing index numbers”)
TEXT	TEXT EDIT	Text setting	P33 (“Title input operation”)
SYSTEM	KEYBOARD	setting for keyboard type	P34 (“Keyboard type setting”)
	PLAY TIME	Display total playing time	P20 (“Time display switching”)
	REC TIME	Display total recording time	P26 (“Time display while recording”)
	BAUD RATE	data transmission speed setting	P35 (“Data communication setting”)
	LENGTH	data word length setting	P35 (“Data communication setting”)
	PARITY	data parity bit setting	P35 (“Data communication setting”)
	STOP BIT	data stop bit setting	P35 (“Data communication setting”)
	INDEX	Index mode on/off	P19 (“Index playback”)

3 – Menu operation

Operation basics

1. **Select the desired menu option**

   Press the MENU key on the front panel or remote control to call up the desired menu. The PLAY option in the PLAY sub-menu will be shown on the display at first.

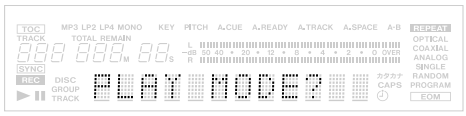


   Front panel operation: **Rotate the MULTI JOG dial to select the desired menu option, then push the dial to confirm.**

   Remote control operation: **Use the MENU (+/-) key to cycle through the different menu options, then press the ENTER key to confirm.**

The sub-menu option screen of the selected menu will be displayed.

If the PLAY option is selected, the sub-menu option shows up like this:



NOTE

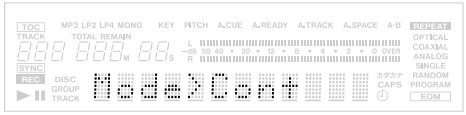
Return to the menu option selection screen, press the ESCAPE key on the front panel or the CLEAR key on the remote control.

2. **Select the desired sub-menu**

   Front panel operation: **Rotate the MULTI JOG dial to select the desired sub-menu, then push the dial to enter the selection.**

   Remote control operation: **Use the MENU (+/-) key to select, then press the ENTER key.**

The menu item screen of the selected sub-menu will appear. If the sub-menu PLAY MODE is selected, the menu item shows up like this:



NOTE

To return to the sub-menu option selection screen, press the ESCAPE key on the front panel or the CLEAR key on the remote control.

3. **Setting the desired menu item or value**

   Front panel operation: **Use the MULTI JOG dial to select the desired menu item or value. Pushing the dial enters and exits menu mode.**

   Remote control operation: **Use the MENU (+/-) key. Pressing the ENTER key confirms and exits menu mode.**

NOTE

Some menu options exist for confirmation purposes only, and the setting cannot be changed.

4. **How to exit menu mode after setting (or confirmation), during menu option display.**

   As well as pushing the MULTI JOG dial or pressing the ENTER key, you can use the MENU key to exit menu mode.

NOTE

The selected menu mode remains after power is turned off, except the TEXT menu.

The CD-RW901 can be used to play back CDs (including CD-R and CD-RW discs that have been recorded and finalized on other types of recorder), as well as CD-R discs and CD-RW discs that have been recorded on the unit.

Audio files in MP3 format on CD-ROM, CD-R and CD-RW are also playable on the unit.

Discs for playback

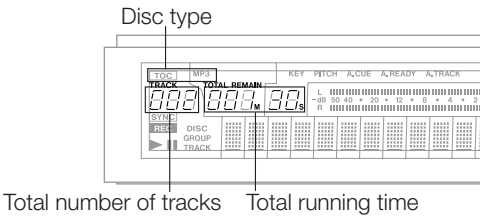
The CD discs in the CD-RW901 can play back the types of discs listed below.

- Commercial pre-recorded CDs recorded in CD-DA format.
- CD-R and CD-RW discs that have been recorded in CD-DA format and finalized properly.
- MP3 files recorded in ISO9660 level 1 and level 2 format on CD-R and CD-RW discs, and properly finalized. MP3 files that are recorded to a disc with Joliet format extensions are also playable.

Simple playback operations

1. **Press the POWER switch to turn on the unit.**
2. **Press the OPEN/CLOSE key to open the disc tray. The display shows `Open`. Insert a disc in the tray with the label side up.**
3. **Press the OPEN/CLOSE key to close the tray. The display shows `Close` when a disc is loaded into the unit, then `TOC Reading` will appear, with the period flashing.**

When the TOC has been read, the display shows the number of tracks and total running time of the disc.



The CD-RW901 also shows one of the following:

TOC A disc finalized
MP3 A disc contains MP3 files

4. **Press the PLAY key to start playback.**

   Adjust the connected monitor system, or the level control for the PHONES on the unit to set the listening level you desire.

WARNING

If you are monitoring using headphones, first adjust the level control to low on the unit, then connect to the PHONES jack before playing back. This will prevent any possible damage to your hearing.

5. **To stop playback, press the STOP key.**

   To temporarily stop playback and enter playback standby mode, press the READY key. To resume playback, press the PLAY key again.

NOTE

The explanation in this manual will assume the user is starting from the normal Continuous mode.

Track selection

Using the skip function

Skipping track numbers backward or forward.

1. **Select desired tracks for playback with the MULTI JOG dial on the front panel. Turning clockwise skips the track number backward and counterclockwise skips forward.**

   Or, press the SKIP key on the remote control. Pressing ⏮ key skips the track number backward and ⏭ key skips forward.

2. **Press the PLAY key to start playback.**

   Or, press the READY key to cue the track and enter playback standby mode after moving to the head of the selected track. To start playback, press the PLAY key.

Selecting by track number

Using the number keys on the remote control, the number of the desired track can be entered directory. Even numbers with two or three digits can be entered easily. For example:

Track 9: press '9' and 009 will be displayed.
Track 12: press '1' and '2' and 012 will be displayed.
Track 103: press '1' and '0' and '3' and 103 will be displayed.

After input, press the **PLAY** key to start playback. Or, the **READY** key to cue the track at its head position and enter playback standby mode.

You can also enter the track number and start playback by pushing the **MULTI JOG** dial or using the **ENTER** key.

NOTE

This function cannot be used in Program or Random mode.

Track search

Normal search

Press the ◀◀/▶▶ search key continuously on the front panel, or the **SEARCH** ◀◀/▶▶ key on the remote control. To stop the search function, simply release the ◀◀ /▶▶ or the **SEARCH** key.

NOTE

The search function does not operate with MP3 discs.

Direct search

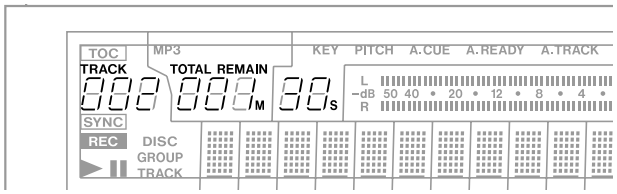
By specifying time from the start of a certain track, you can start playback from a specified point of a specified track.

■ Basic operation

During stop, play or playback standby modes, use the number keys on the remote control to input the three-digit track number (such as 002 for track 2), then the desired elapsed time (***min **sec) from the start of that track.

Example: To specify 1 min 30 sec from the start of track 2, input "002 001 30".

During input, the counter in the display will flash.



NOTE

Regardless of the time display mode (see "Time display switching on page 20), the time from the start of the specified track is displayed.

Pressing the **CLEAR** key cancels the input at any stage during input.

During stop or playback modes, when the final digit is entered, the desired position is automatically located and playback will begin from the desired point. During playback standby mode, at the desired point the unit will enter playback standby mode.

NOTE

If a point which does not exist is entered, Direct Search time entry mode will be cancelled.

The direct search function cannot be used in program or random mode.

For MP3 discs, time cannot be specified within a track. However, if you input the three-digit track number, playback will begin from the start of that track.

■ Operation variations

Even if the final “seconds” time value is not input, playback will begin from the selected “minutes” time after pressing the **ENTER** or **PLAY** key. Or, if you press the **READY** key, the unit will enter the playback standby mode at the selected point.

Specifying a track number only

After inputting the track number, press the **ENTER** or **PLAY** key to begin playback of that track, or the **READY** key to cue the track and enter playback standby mode.

NOTE

Instead of inputting the three-digit track number, you can input only the desired track number. Example: To specify track 3, input only “3”.

Specifying to the minute

After inputting the three-digit track number and the number of minutes after the start of the track, press the **ENTER** or **PLAY** key to begin playback of that track, or the **READY** key to cue the track and enter playback standby mode.

Example: To specify 1 min 00 sec from the start of track 2, input “002 001”

NOTE

Following the above example, if “0021” is input, the same position will be located.standby mode.

Index search

This Index search function allows you to search indexes within a track that were assigned during recording (see “Incrementing index numbers automatically” on page 29).

Use the INDEX option in the SYSTEM sub-menu (see “Operation basics” on page 16) to set the function on. The **MULTI JOG** dial or **MENU (+/-)** key on the remote control can be used to select on or off.

`Index XX` appears on the display.

Select a track you want to assign indexes to, and put the unit in playback or playback ready mode.

Use the ▶▶/▶ or ◀◀/◀ key to search through the indexes. The unit locates to the index selected, and starts playback at that point, or goes into playback ready mode after moving to that point.

Playback modes

There are four different playback modes. The selected mode will be indicated on the left of the display.

- Continuous playback mode (default setting): no indication lamp
- Single playback mode: **SINGLE** is lit
- Program playback mode: **PROGRAM** red lamp is lit
- Random playback mode: **RANDOM** red lamp is lit

The playback mode can be selected using the **P.MODE** key on the remote control unit. Pressing the key changes the playback mode on the display in the following order: **Continue➡Single➡Program➡Random**

You can also select the playback mode using the PLAY MODE option in the PLAY sub-menu (see “Operation basics” on page 16). Turning the **MULTI JOG** dial clockwise changes the playback mode shown on the display in the following order: **Mode>Cont➡Mode>Single➡Mode>Program➡Mode>Random**

Pressing the **MENU** key or pushing the **MULTI JOG** dial returns to normal mode from the menu mode.

While the mode can be changed from any playback mode, the explanation in this manual will assume the user is starting from the Continuous mode.

NOTE

The selected playback mode remains after power is turned off. However, the program playback mode will be cleared to “Continuous” mode when the power is turned off.

Continuous playback

Programing is cancelled, and playback continues in the normal order.

1. **When stopped, set the mode to display Continue or Mode>Cont.**
2. **Press the PLAY key to begin playback in order of the track number.**

Single-track playback

This function enables playback of just a single track.

1. **When stopped, set the mode to display Single or Mode>Single.**
2. **Use the SKIP keys or the number keys (0~9) on the remote control to select the desired track.**

   The MULTI JOG dial can be used to select the track also.
3. **Press the PLAY key to begin playback.**

   After the selected track finishes, playback stops.

Random playback

In this mode, the unit will play back all the tracks on the disc in completely random order, regardless of track number.

When stopped, set the mode to display **Program** or **Mode>Random**. Press the **PLAY** key and random playback will begin.

NOTE

Even when the power is turned off, the unit will remain in Random mode.

Program playback

This function enables playback of selected tracks in any desired order. Up to 99 tracks can be selected for program playback.

1. **When stopped, set the mode to display Program or Mode>Program.**
2. **Use the number keys (0~9) on the remote control unit to select each desired track for program playback, then press the ENTER key.**

   You can also rotate the MULTI JOG dial to select the track number and push to enter.

   The track number will be entered into the program.

Repeat the above step 2 until the desired program is completed. As the program is being created, the program number and total program playing time is revised on the display.

NOTE

If the CLEAR key is pressed, the programmed track will be deleted from the last.

3. **When program setting is completed, press the PLAY key to begin playback of the tracks in the programmed order.**

NOTE

If the STOP key is pressed without first pressing the PLAY key, all the program data will be erased.

When stoppped, if the playback mode is switched to another, all the program data will be erased.

The programmed play order is not memorized when power is turned off.

In this mode, if there are no tracks programed, the CD-RW901 will not start playback.

If an attempt is made to enter more than 100 program steps, the message PGM Full! appears on the display.

If the total program playing time exceeds 999 min 59 sec, --- : -- appears on the display.

Time display switching

When the TIME key on the front panel or the remote control is pressed, the time display will switch through several modes on the display.

- Elapsed track time (no display light indication)
- Remaining track time (**REMAIN** is lit in the display)
- Elapsed disc time (**TOTAL** is lit in the display)
- Remaining disc time (**TOTAL** and **REMAIN** are lit in the display)

When stopped, the total recording time is shown, regardless of the status of the **TOTAL** and **REMAIN** indicators.

NOTE

In program mode, pressing the TIME key displays the elapsed and the remaining time of the whole program.

When playing an MP3 disc, elapsed track time is always displayed, and the TIME key cannot be used.

For details on time display during recording, please refer to “Time display while recording” in “Recording” section on page 26.

Even when power is turned off, the time display mode setting is retained.